

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Akira Ogino et al.

Serial No.:

Filed :

For : METHOD AND DEVICE OF SUPERIMPOSING AN ADDITIONAL INFORMATION SIGNAL ON A VIDEO SIGNAL AND DETECTING SAID ADDITIONAL INFORMATION FROM SAID VIDEO SIGNAL

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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to the initial examination of the above-identified application, which is a continuation of application Serial No. 09/145,428 filed September 1, 1998, Applicants respectfully request that the application be amended as follows.

IN THE CLAIMS

Please cancel claims 1-26, without prejudice or disclaimer, and substitute therefor the new claims 27-34 set forth below.

--27. (New) A method for detecting additional information superimposed on a signal, comprising the steps of:

generating a code;

finding correlations between said code and each of predetermined intervals of said signal on which said additional information is superimposed;

integrating results of correlation found from said predetermined intervals of said signal by adding the result when the result is found from a non-inverted interval and by subtracting the result when the result is found from an inverted interval; and

determining said additional information superimposed on said signal based on a result of said integrating.

--28. (New) the method as claimed in claim 27, wherein said step of determining said additional information includes determining said additional information by judging whether said result of said integrating exceeds a predetermined threshold.

--29. (New) The method as claimed in claim 27, wherein said step of integrating results of correlation is performed by adding the result when the result is found from a non-inverted interval and by adding an inversion of the result when the result

is found from an inverted interval.

--30. (New) The method as claimed in claim 27, wherein said step of finding correlations comprises

finding a value of said signal for one of said predetermined intervals;

finding a code value of said code for said one of said predetermined intervals;

determining whether the value of said code is non-zero;

adding the value of said signal to an accumulated addition/subtraction value when said code value is determined to be zero;

subtracting the value of said signal from the accumulated addition/subtraction value when said code value is determined to be non-zero; and

repeating said steps of finding a value of said signal, finding a value of said code, determining, adding, and subtracting for all of said predetermined intervals.

--31. (New) Apparatus for detecting additional information superimposed on a signal, comprising:

a generator for generating a code;

means for finding correlations between said code and each of predetermined intervals of said signal on which said additional information is superimposed;

an integrator for integrating results of correlation found from said predetermined intervals of said signal by adding the result when the result is found from a non-inverted interval and by subtracting the result when the result is found from an inverted interval; and

means for determining said additional information superimposed on said signal based on a result of said integrating.

--32. (New) The apparatus as claimed in claim 31, wherein said means for determining said additional information includes means for determining said additional information by judging whether said result of said integrator exceeds a predetermined threshold.

--33. (New) The apparatus as claimed in claim 31, wherein said integrator includes means for adding the result if the result is found from a non-inverted interval and for adding an inversion of result if the result is found from an inverted interval.

--34. (New) The apparatus as claimed in claim 31, wherein said means for finding correlations comprises:

means for finding a value of said signal for one of said predetermined intervals;

means for find a value of said code for said one of said

predetermined intervals;

means for determining whether the value of said code is non-zero;

an adder for adding the value of said signal to an accumulated addition/subtraction value when said code value is determined to be zero; and

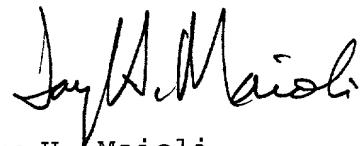
a subtracter for subtracting the value of said signal from the accumulated addition/subtraction value when said code value is determined to be non-zero.--

REMARKS

Original claims 1-26 have been cancelled, without prejudice or disclaimer, and new claims 27-34 have been substituted therefor. This application is a continuation of application Serial No. 09/145,428 filed September 1, 1998.

An early and favorable examination on the merits is earnestly solicited.

Respectfully submitted,
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